

ALUMINUM ELECTROLYTIC CAPACITORS

TN series

FEATURES 特性

- Load Life:105°C 3000 hours
壽命:105°C 3000 小時
- Suitable for the products below the temperature of -40°C
適用於在-40°C以下使用的產品

SPECIFICATIONS

Item 項目	Performance Characteristics 特性				
Operating Temperature Range 工作溫度範圍	-40°C ~ +105°C				
Rated Voltage Range 額定電壓範圍	400V ~ 450 W.V.				
Capacitance Range 靜電容量範圍	3.3~220uF				
Capacitance Tolerance 靜電容量誤差	±20% (20°C, 120Hz)				
Leakage Current 洩漏電流	Nominal Capacitance $\leq 10 \mu F$ $I=0.02CV + 25\mu A$ (After 2 minutes) 額定容量 $\leq 10 \mu F$ $I=0.02CV + 25\mu A$ (2 分鐘後) Nominal Capacitance $> 10 \mu F$ $I=0.02CV$ (After 2 minutes) 額定容量 $> 10 \mu F$ $I=0.02CV$ (2 分鐘後)) I =Leakage Current (μA) , C =Nominal Capacitance (μF) , V =Rated Voltage (V) I =洩漏電流 (μA) , C =額定容量 (μF) , V =額定電壓 (V)				
Dissipation Factor ($\tan \delta$) 散逸因素 (損失角正切值)	Rated voltage (V) 額定電壓(V)	400	420	450	MAX (20°C, 120Hz)
	Tan δ 損失角正切值	0.20	0.20	0.20	
Low Temperature Stability Impedance Ratio(MAX) 低溫特性阻抗比率	Rated voltage (V) 額定電壓 (V)	400	420	450	MAX (120Hz)
	Z(-25°C)/Z(+20°C)	8	8	8	
	Z(-40°C)/Z(+20°C)	17	17	17	

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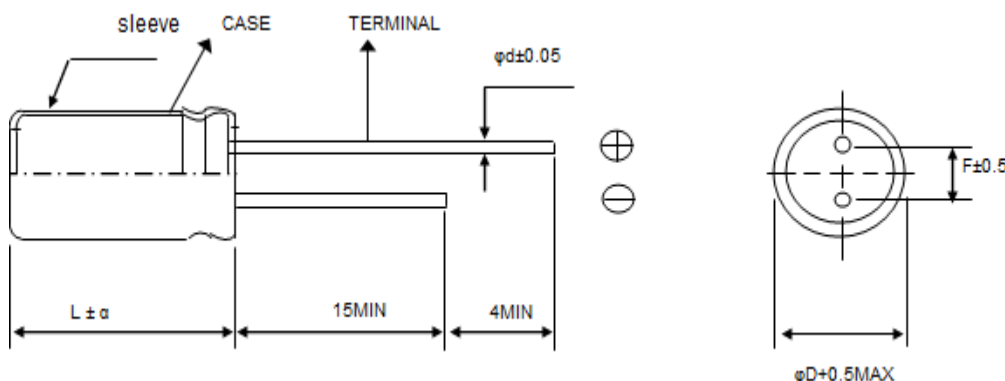
Load Life 負荷壽命	After 3000 hours' application of rated voltage at 105°C, capacitors meet the characteristics requirement listed as following. 在 105°C 下印加額定電壓 3000 小時後, 電容特性需滿足以下要求。	
	Leakage Current 洩漏電流	Not more than the specified value. 不超出規格值。
	Capacitance Change 容量變化率	within ±20% of the initial value 初始值±20%以內
Shelf Life 放置壽命	After leaving capacitors under no load at 105°C for 1000 hours, the capacitors shall meet the following requirements. 電容放置在 105°C 無印加電壓的情況下儲存 1000 小時後, 電容需符合以下要求。	
	Leakage Current 洩漏電流	Not more than the specified value. 不超出規格值。
	Capacitance Change 容量變化率	within ±20% of the initial value 初始值±20%以內
Standard 參照標準	According to JIS C-5101 依據 JIS C-5101	

Frequency coefficient

頻率系數

Frequency(Hz)	60(50)	120	1k	10k	≥ 100k
Coefficient	0.80	1.00	1.45	1.65	1.75

DIMENSIONS 尺寸(mm)



ϕD	6.3	8	10	12/12.5/13	16	18	20	22
ϕd	0.5	0.6	0.6	0.6	0.8	0.8	0.8	1.0
F	2.5	3.5	5.0	5.0	7.5	7.5	10.0	10.0
α	L ≤ 19: $\alpha = 1.5$, L ≥ 20: $\alpha = 2.0$							
$\phi D \geq 20 + 1.0 \text{ MAX}$								

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STANDARD SIZES AND RIPPLE CURRENT

尺寸及紋波標準

SIZE φ DxL(mm)Ripple Current(mA 105°C 120Hz) r.m.s

W.V Cap(μ F)		400(2G)		420(2H)		450(2W)	
		Size	Ripple Current	Size	Ripple Current	Size	Ripple Current
3.3	3R3	8x11.5	35			8x11.5	42
		10x12.5	45			10x12.5	60
						12.5x20	75
4.7	4R7	8x10	50			10x12.5	65
		10x16	70				
6.8	6R8	8x11.5	65			10x16	80
		8x16	70				
		10x12.5	72				
8.2	8R2	10x12.5	78	8x11.5	80		
		8x11.5	75	8x15	100		
10	100	8x11.5	75			10x16 12.5x16	125 128
		10x10	75	8x16	90		
		10x12.5	80	10x12.5	100		
		12.5x12	90				
12	120	10x12.5	100				
15	150	8x16	90			12.5x16	140
		10x16	90				
		12.5x16	120				
22	220	10x16	110	12.5x16	125	12.5x20	168
		12.5x16	155			16x20	180
27	270	12.5x20	175			12.5x25	200
33	330	12.5x20	200	12.5x25	200	12.5x25	200
		16x20	225			16x20	230
						18x20	250
39	390	12.5x20	240	12.5x30	230	12.5x25	220
47	470	10x30	280	12.5x35	268	12.5x40	450
		12.5x25	350			16x20	220
		16x20	250			18x25	280
		18x20	250				

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W.V		400(2G)		420(2H)		450(2W)	
Cap(μ F)		Size	Ripple Current	Size	Ripple Current	Size	Ripple Current
56	560	12.5x30	275	12.5x40	480	12.5x35 16x35.5	335 350
		16x25	282				
		18x20	285				
68	680	12.5x35	325	12.5x35 18x20	470 350	12.5x40 16x25 18x25	560 350 310
		16x30	325				
		18x20	325				
82	820	12.5x35	550	12.5x40 18x25 16x31.5	580 330 390	12.5x45 18x30	550 410
		18x25	375				
		16x25	353				
100	101	12.5x45	360	18x31.5	500	18x30	480
		16x30	430				
		18x25	430				
110	111	18x31.5	470			18x35.5	510
120	121	18x30	500	16x35.5	557	16x40	510
		16x35.5	470	18x31.5	610	18x30	500
150	151	18x31.5	520	18x35.5	680	18x40	770
		16x40	530			20x41.5	840
180	181	18x40	628	18x40	710	20x46.5	950
				20x40	730		
220	221	18x45	730				